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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,048	07/11/2001	Masaaki Tanozaki	1625-118	9397

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EXAMINER
JONES, JUDSON

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/903,048	TANOZAKI ET AL.	
	Examiner	Art Unit	
	Judson H Jones	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 5/27/03

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14 is/are rejected.

7)☒ Claim(s) 15 and 16 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11 July 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5-9, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat 6,215,206 B1 in view of Miura et al. 6,047,461 and Woollenweber et al. 6,085,527. Chitayat discloses an electromagnetic reciprocal drive mechanism having a permanent magnet cluster with plate like permanent magnets 25a, 25b as shown in figure 6b, the magnets being cylindrically arranged, a support for the permanent magnet cluster 26 as shown in figure 1a, a laminated core as described in column 5 lines 6-10 with coils 15a, 15b wound around the core with a thin sheet 11 wrapped around the cluster as described in column 5 lines 50-55. Chitayat's thin sheet is an encoder sheet, not a sheet with an adhesive layer and with adhesive impregnated into the sheet designed to secure the cluster to the support. In column 6 lines 34-37, Chitayat describes his magnets as being "affixed" to the supports and in column 5 lines 45-46 there is a suggestion of molding the magnets. In column 3 lines 13-40 and in column 5 line 48 to column 6 line 4 Woollenweber et al. teaches using a retaining sleeve and a high-temperature structural adhesive to hold the magnet cluster in place. Since Chitayat does not disclose details on how his magnet cluster can be affixed to a support except for the suggestion of molding them together and since Chitayat and Woollenweber et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a retaining sleeve or retaining sheet in the electromagnetic drive mechanism. In regard to the layer of adhesive on the inner surface of the sheet, when the adhesive has been applied and

the sheet is in place, the adhesive will be layered on the inner surface of the sheet. In regard to the limitation of the support being flush with the magnet cluster, see Wollenweber figure 3. The word "flush" is defined as "directly abutting or immediately adjacent as (1) : set even with an edge of a type page or column : having no indentation" in Merriam Webster's Collegiate Dictionary Tenth Edition copywright 1997. In Wollenweber figure 3 the edges of element 35 are flush with the edges of magnets 34. Woollenweber discloses the electromagnetic drive mechanism having a magnet cluster and a sheet but does not disclose the sheet being impregnated with an adhesive. Miura et al. discloses impregnating sheets with a plastic resin for adhesion in column 4 lines 31-39 and curing the resin in a high-temperature furnace. Since Miura et al. and Chitayat as modified by Woollenweber et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a sheet impregnated with an adhesive in addition to having the sheet with an adhesive layer in order to make the strongest possible attachment of the magnet cluster to the support so as to prevent the magnet cluster from being dislodged and causing damage to the drive mechanism.

In regard to claims 5 and 6, see the bottom of element 26 in Chitayat figure 1a.

In regard to claims 7 and 8, see the vertical parts of element 26 in Chitayat figure 1a.

Claims 2 and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat as modified by Woollenweber et al. and Miura et al. as applied to claims 1 and 9 above, and further in view of Sheer 4,944,975. Chitayat as modified by Woollenweber et al. and Miura et al. discloses the electromagnetic drive mechanism with the impregnated sheet but does not disclose the material of the sheet being paper. Sheer teaches in column 2 lines 41-46 that epoxy

impregnated aramid paper can be substituted for fiber glass woven fabric and that a molded panel made from aramid paper passed an Underwriters Laboratory test for use up to 220 degrees centigrade. Since Sheer and Chitayat as modified by Woollenweber et al. and Miura et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized an impregnated paper to bond a magnet cluster to a support in order to reduce the heating requirements for treating the bonding material as described in Sheer et al. column 2 lines 27-48 and thus to reduce the cost of the drive mechanism.

Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chitayat as modified by Woollenweber et al. and Miura et al. as applied to claims 1 and 9 above, and further in view of Japanese reference 7-31113. Chitayat as modified by Woollenweber et al. and Miura et al. discloses the electromagnetic drive mechanism with the impregnated sheet but does not disclose small holes formed in said sheet and adhesive layer. Japanese reference 7-31113 teaches in the English abstract that making holes in a sheet for allowing adhesive to contact the layer to which the sheet is being attached makes a good bond. Since Japanese reference 7-31113 and Chitayat as modified by Woollenweber et al. and Miura et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized small holes in a sheet designed to hold a magnetic cluster to a support in order to make a better bond between the sheet and the support so as to prevent damage to the machine.

Allowable Subject Matter

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed 5/27/2003 have been fully considered but they are not persuasive. See the changes in the rejection of claim 1 on page 3, lines 1-6 of this office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ
July 13, 2003

KARL TAMAI
PRIMARY EXAMINER